Chapter 9

AVIATION SERVICES ASSESSMENT

Introduction

A focus of this study concerns the requirement for aviation services as expressed by pilots (users) and airport owners/sponsors and fixed base operators/tenants (providers). These service needs may be inferred from the results of surveys presented in Appendices B, C and D. The term "aviation services" can include a number of items, many of which are highlighted in the survey questionnaires and responses. Those that are especially important as evidenced by the number of responses may be classified as services being met or not being met and are discussed below. The results suggest areas in which ADOT Aeronautics can supplement or otherwise support the provision of unmet needs.

Service Needs That Are Being Met

Aviation Fuel

The availability of fuel at airports is a key service requirement. VFR-only rated pilots expressed a need for low-lead avgas while IFR-rated pilots indicated requirements for both low-lead avgas and Jet-A fuel. These results are directly related to the types of aircraft typically flown by pilots with such ratings. The ability to meet fuel requirements is evidenced by the lack of negative comments expressed by users and confirmation from the providers that this is a service need that is being met.

Maintenance

Although about one-third of all pilots surveyed do not own the aircraft they fly, the need for maintenance of the aircraft was cited as a strong requirement at airports. Few pilots reported a lack of maintenance capabilities at the airports they frequent, and the providers did not indicate that maintenance service was an unmet need.

Aircraft Tiedown

Pilots expressed a requirement for aircraft tiedown space, a need that is being met by the providers based on the lack of comments to the contrary.

Lounge/Waiting Area

Most pilots utilize a lounge/waiting area at the airports they visit and the providers of the airport terminal facility suggest that this need is being met.

Telephone

Access to a public telephone is an essential need at airports and this capability appears to be well accommodated.

Service Needs That Are Not Being Met

Wash Racks

A sufficient number of users and providers expressed a need for wash racks in order to clean aircraft exteriors, thus confirming this as an unmet service need. Although no reasons were mentioned as to the cause for this situation, ADOT Aeronautics may want to investigate potential environmental rules and procedures that can inhibit the provision of this service at reasonable costs. The evaluation should also include an assessment of the ability of airports to properly manage the wastewater runoff generated from plane washing activities. It may be viable to prepare a generic design standard for such facilities that can be site-adapted in compliance with typical environmental safeguards and permitting regulations.

Hangar/Sun Shade Storage

The need for conventional hangar and/or sun shade protection for aircraft storage was mentioned as an unmet service need by the providers. These comments likely reflect needs expressed by pilots and aircraft owners who are on waiting lists for such facilities. The relatively high cost associated with these capital improvements and the inability to earn an appropriate return on investment are the likely causes for the lack of these facilities. Privately-owned, public-use airports are especially pressed for such funds because their capital costs are higher and financing is more difficult to obtain from traditional lenders.

ADOT Aeronautics presently offers an innovative low interest rate funding program for these and other types of facilities. The program offers the

opportunity to finance such facilities on the best financial terms available so that airport sponsors can provide higher levels of service to their users. This program has the potential to bring required rental fees in line with the resulting debt service requirement. The program may need some form of additional and/or new promotion to ensure that airport sponsors are aware of the State service that is available to them.

Rental Cars/Courtesy Vehicles

About 29 percent of all pilots expressed a need for rental cars but did not suggest that this service feature was being unmet. Airport service providers cited an opposite opinion. QED believes that these service amenities are a function of the provider of services at the airport and that ADOT Aeronautics cannot play a role in facilitating the delivery of such services.

Restaurants/Food

Similar to the situation with regard to rental and courtesy vehicles, few pilots expressed a need for eating facilities at the airport while the provider responses suggested this to be an unmet need. These results may be due to the survey questionnaire design, yet it is unlikely that ADOT Aeronautics could effect a program to improve upon these perceived needs.

Flight Planning Room

Pilots require an area that can be equipped to enable flight planning activities, and the responses from the users support this need. Provider responses suggest that this need is not being met. Whether this unmet need is a factor of available space or equipment to meet an operational activity function is not clear. Nonetheless, providers have the impression that flight planning room requirements represent an unmet need. This service amenity is tied in part to that of weather data and computer access described below; however, provision of the necessary floor area for flight planning activities is a responsibility of the airport owner and/or operator.

Weather and Computer Access

The increasing availability of weather data and products has stimulated a demand for such information by pilots. About one-half of all pilots consider access to weather data as a primary service need and they use a wide range of data sources to acquire the information. Responses from the providers recognize that demand and indicate that this need is not presently well served. Capital costs to improve this service would involve personal computers and

printers (preferably color). This unmet service need could be improved upon by a program administered by ADOT Aeronautics to acquire such equipment in multiple quantities to take advantage of lower unit costs. The providers would be responsible for telephone access or other suitable communications links to acquire the desired weather data products. This initiative could be integrated into an overall statewide program that addresses the real-time acquisition and dissemination of weather data and conditions, forecasts and related products.

Arizona Aeronautical Chart

Most pilots (62 percent) expressed a desire to have the Arizona Aeronautical Chart made available once again by ADOT Aeronautics. The chart is quite convenient because it combines information from several federal aviation sectional maps into one product. Pilots recognize that the chart would be authorized for only reference and informational purposes. ADOT Aeronautics should consider re-establishing this service.

Educational Seminars/Publications

The majority of responding pilots indicated an interest in education-related services that could be administered by ADOT Aeronautics. A published guide to airports in Arizona was also cited as a strong need. The FAA currently conducts flight safety seminars and it is possible that ADOT Aeronautics could develop a partnering activity. Additionally, publication of an ADOT Aeronautics newsletter and safety briefs would be well received by the pilot community.

Potential ADOT Aeronautics Initiatives

Publications

State aviation agencies have historically taken a proactive role in enhancing the use of the aviation facilities in which they have invested public funds. These activities also include pilot educational efforts to enhance flight safety.

Many state aviation agencies publish a monthly or other periodic newsletter that is used to communicate items of interest to registered pilots and others in the airport and aviation industry. Often, these newsletters include flying techniques which are especially relevant to conditions encountered within the state – high density altitude operations, mountainous terrain and icing are some examples. One state, Idaho, has produced videos on flying in mountainous terrain and within their Wilderness Area. These newsletters also serve as a means of communicating state policies and programs with regard to aviation.

Several state aviation agencies publish aeronautical sectional maps, authorized for information purposes only, as a service to pilots. These maps are updated annually and usually include features not found on federal charts such as airport runway layout diagrams and safe flying hints.

ADOT Aeronautics has published items of interest to the aviation public. These include:

1. The Annual Progress Report – reviews the activities of ADOT Aeronautics.

2. Helicopter Facts – an educational pamphlet which provides basic information on helicopters and how they fly.

3. Bald Eagle Nesting Sites – a brochure designed to provide pilots with the most specific and current information available on sensitive bald eagle nest areas.

4. Desert Survival Guide – a pamphlet outlining various desert survival principles, including specific techniques in survival situations.

5. Arizona Aviation Facts – a reference on general aviation data and facilities in Arizona.

6. Five Year Airport Development Program - a listing of projects anticipated to be funded at eligible airports over a five-year period.

These items may need to be updated periodically to maintain their usefulness.

Items of interest to the pilot community can also released through cooperative efforts with private sector companies and organizations. For example, the publication, "Arizona Flyways," is an excellent means of disseminating information to pilots within Arizona as well as to those who subscribe to the publication from other states. Information can also be released in conjunction with mailings of the Arizona Pilots Association and Arizona Airports Association.

School Outreach Programs

Some state aviation agencies have organized formal programs that seek to introduce aviation as a recreation and career opportunity through the public school system. Illinois, for example, has been recognized by its peers in aviation for these types of programs which reach students at all grade levels. These activities differ from the occasional classroom visit to the local airport in that they

are supported with literature, videos and other communication means to deliver the intended message.

ADOT Aeronautics has participated in the State's Aviation Education Week, art contests and aviation expositions. A more formalized year-round program may be desirable.

Weather Data Dissemination

The preceding sections have highlighted state aviation agency activities that for many years have been traditional areas of engagement and in which ADOT Aeronautics has been also been involved to varying levels or degrees.

1. Since the mid-1908's, state aviation agencies have begun initiatives that broaden their reach into operational issues. Changes in federal funding programs that permit the states to acquire facilities and equipment in block purchases on behalf of several airport sponsors and thereby reduce administrative and unit acquisition costs have contributed to this involvement. Revised or new tax programs have generated significantly higher funding levels than in the past for some states. Some state aviation agencies, excluding ADOT Aeronautics, receive a portion of automobile fuel tax collections to fund aviation programs as part of an increasing trend to multimodal initiatives. In addition to enabling states to fund projects that were ineligible for federal funding participation (hangars, for example), some states have made major investments in enhancing the acquisition and dissemination of aviation weather data. Notable examples include:

    1. Minnesota – Installed computer terminals at 43 airports to provide direct links to federal weather data networks. Later, the program expanded to 57 computer terminals at 48 airports as well as transmitting live color weather radar through the public broadcast television system. The State then initiated a program to install automated weather observing system (AWOS) facilities at 37 airports, each of which is linked to input the weather report to the FAA national aviation data interchange network (NADIN). These AWOS units will be supplemented with precipitation sensors in the near future. A corollary program that involves other State agencies serves as a means for pilots to access weather data maintained in federal networks.

    2. Iowa – Purchased and installed a total of 32 AWOS units each linked to a single host computer which then transmitted the AWOS reports on a 20-minute update cycle to NADIN. The Iowa Aviation Weather

System (IAWS) is the first and only host-based system in operation in the country. The IAWS also provides for the acquisition of weather data contained within the federal circuits and the capability to file flight plans.

3. Illinois, Pennsylvania, Tennessee and Virginia – Have provided funding assistance to individual airports to acquire AWOS units but without a networking feature as implemented by Iowa. Illinois recently acquired several AWOS units in a single purchase. Virginia also provided computer terminals to access federal weather data networks, as did Pennsylvania.

4. Missouri – Is evaluating the integration of AWOS and roadway weather information system (RWIS) data into a host-based network. Outputs of the system include site-specific observations as well as the potential to generate value-added products and services to industry, state agencies, federal agencies and the general public. Arizona DOT is in the process of enhancing its deployment of RWIS units and this could lead to a coordination of activities with ADOT Aeronautics.

5. Maryland, Michigan and Virginia – Are installing ground communications outlets that allow pilots to contact the controlling FAA center for clearance deliveries and to close flight plans. These actions would be directly from the cockpit at airports not equipped with FAA remote transmitter receivers.

Helicopter System Planning

There are many heliport/landing areas used by emergency and private concerns located throughout Arizona. There is an ever present need for ADOT Aeronautics to assist local jurisdictions in the permitting of the installation of these aviation facilities and in means to prevent instances that jeopardize their continued utilization and services. Guidelines for compatible land use, siting, and physical layout and safety standards can be prepared for the benefit of local planning and zoning boards. The FAA has established special standards for the establishment of GPS approaches at heliport facilities and these may be applied to define potential procedures to enhance the use of heliports during poor weather conditions, especially for those facilities fulfilling an emergency services mission. A heliport system study addressing these and other related needs, and facilitating interaction among heliport users, operators and local government officials is recommended, especially in the relatively more populated metropolitan areas of Arizona.